

S. V. PREDEEP* & M. P. NAYAR*: **Notes on *Shuteria ferruginea* (Benth.) Baker (Leguminosae-Papilionoideae)**

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Shuteria ferruginea Baker の学名について

Bentham (1852) described the species *Amphicarpaea ferruginea* based on Graham's specimen (in Wall. Cat. No: 5514, as *Glycine ? ferruginea*, nom. nud.) collected from Nepal. Later on Baker (1876) included this species under the genus *Shuteria* Wight & Arn. Subsequently many taxonomists followed the similar view, including Nguyen Van Thuan (1972) who however mentioned only the name *Glycine ferruginea* Grah. nom. nud. under the synonymy of *Shuteria hirsuta* Baker. Ohashi (1975, 1979) and Ohashi et al. (1982) while studying the Himalayan Flora, examined more collections of this taxon and agreed with Bentham in the generic placement of the species in question. Recently Grierson & Long (1987) included this species again under the genus *Shuteria*. Under the circumstances the authors have undertaken a critical study of this species with the help of specimens deposited in the Central National Herbarium (CAL).

Amphicarpaea Elliot ex Nuttall (nom. conserv.) is a small genus with 3 species distributed in North America, Asia (Nepal, Bhutan, India, China, Korea, Japan, Burma, Thailand etc.) and Africa. *Shuteria* Wight & Arn. (nom. conserv.) is also a closely related small genus with 4 species distributed purely in the Old World, where they are mostly found in countries such as Nepal, Bhutan, India, Bangladesh, China, Burma and southwards to Malaya peninsula to Polynesian islands. One species *Shuteria vestita* Wight & Arn., introduced to Africa is being naturalised there (Verdcourt 1971).

A critical study of Graham's specimen (Wall. Cat. No. 5514) and other authentic specimens revealed that these specimens do not belong to the genus *Shuteria* Wight & Arn. Another specimen in the Wallich herbarium listed as *Glycine ? cylindriflora* (Wall. Cat. No. 5516) nom. nud. is also found to be conspecific with the Graham's specimen. *Shuteria ferruginea* (Benth.) Baker is

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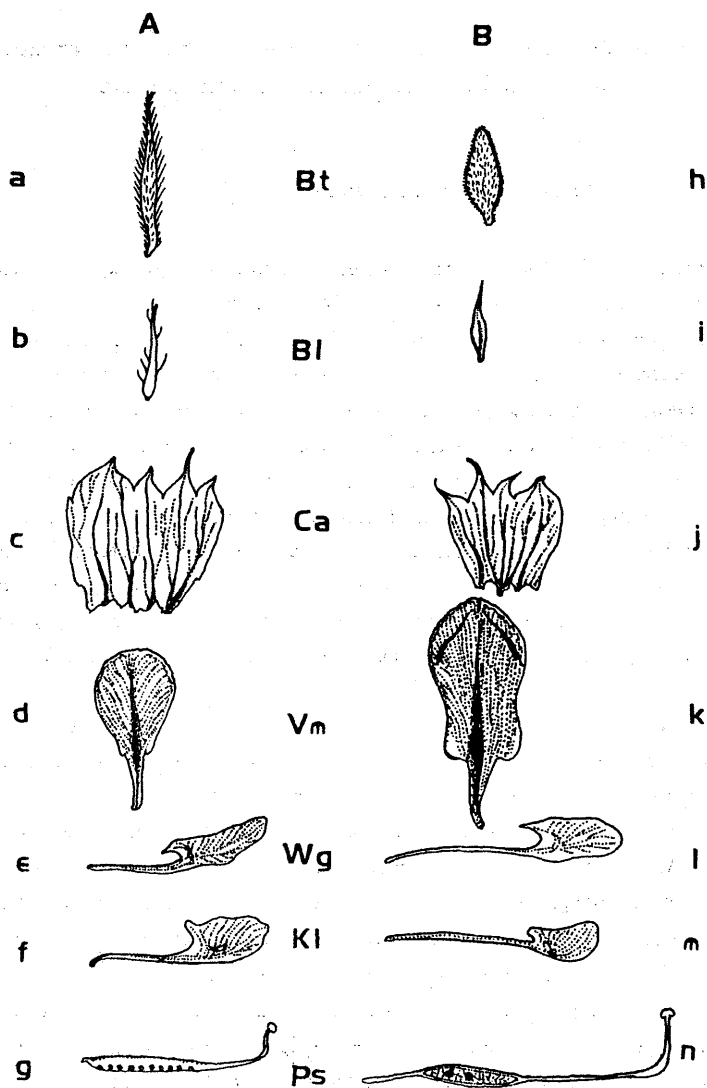


Fig. 1. Floral parts of *Shutteria hirsuta* and *Shutteria ferruginea* (= *Amphicarpaea ferruginea*).
 A. *Shutteria hirsuta* (a-g from C.B. Clarke 12577 A, CAL; a & c×3, b×5, d-g×2). B. *Shutteria ferruginea* (h-j from J.C. White. 49 & k-n from Forest 49; h & j-m×2, i & n×3).
 Bt. Bract. Bl. Bracteole. Ca. Calyx. Vm. Vexillum. Wg. Wing. Kl. Keel. Ps. Pistil.

more similar to *Shuteria hirsuta* Baker than to any other species of *Shuteria*. They resemble in morphological characters like habit, leaf shape etc. But *Shuteria ferruginea* differs from *Shuteria hirsuta* in many characters like in the nature of inflorescence and calyx, pandurate shaped vexillum, length of the claw of wings and keels, shape and structure of ovary and style etc. Mature pods were not available for examination in *Shuteria ferruginea* (Benth.) Baker. The major differences between *Shuteria ferruginea* and *S. hirsuta* are given in Fig. 1 and Tab. 1.

Tab. 1. The major differences between *Shuteria ferruginea* and *S. hirsuta*.

Organ	<i>Shuteria ferruginea</i>	<i>Shuteria hirsuta</i>
Vexillum	Pandurate, auricles enlarged laterally.	Obovate, auricles very small.
Wings & Keels	Length of claw 10-11 mm, double the length of lamina (4-5 mm).	Length of claw 5-6.5 mm, more or less equal to the length of lamina (4.5-6 mm).
Pistil	<p>Stipe conspicuous, 2-2.5 mm long.</p> <p>Ovary elliptic, 4-5 mm long, pubescent-pilose along the dorsal and ventral margins only, glabrous laterally with polygonal markings.</p> <p>Ovules 2 or 3.</p> <p>Style filiform, 7-8 mm long, starting point from the apex of ovary clearly demarcable</p>	<p>Stipe inconspicuous, up to ca. 0.5 mm.</p> <p>Ovary oblong, elongated, 7.5-9 mm long, either wholly glabrous or minutely pubescent; no markings laterally.</p> <p>Ovules 8-12.</p> <p>Style as the narrowing continuation of the ovary; starting point not clearly demarcable.</p>

It is evident from Tab. 1 and Fig. 1 that the morphological features of *Shuteria ferruginea* in comparison with *Shuteria hirsuta* differ considerably and show more affinity to the genus *Amphicarpaea* than to *Shuteria*. So we consider the views of Bentham (l.c.) and Ohashi (l.c.) regarding the generic placement of this species appropriate. Refer to Ohashi *et al.* (1982) for the detailed synonymy.

Distribution. This species include 2 distinct varieties viz. *Amphicarpaea ferruginea* var. *ferruginea* and *A. ferruginea* var. *bracteosa* (Prain) Ohashi & Tateishi. Ohashi *et al.* (l.c.) stated that *Amphicarpaea ferruginea* var. *fer*.

ruginea is found in countries like Nepal, Bhutan, Burma and China (Yunnan). In addition to this, the typical variety is available in India (Sikkim) also as already reported by Prain (1897). Ohashi & Tateishi reported the occurrence of the variety namely *A. ferruginea* var. *bracteosa* from Thailand, far away from the type localities Meghalaya (Khasia) and West Bengal (Darjeeling) in India. During the present studies, a specimen has been located in the Central National Herbarium (CAL) from Janugme, Rubymines in Upper Burma at an altitude of c. 2300 m (7539 ft), collected by A. Rodger in September 1914. This finding fills the long gap of the distributional range of this particular variety extended between North-East India and Thailand.

Specimens examined. *Amphicarpaea ferruginea* var. *ferruginea*. Nepal, Wallich 5514; Painuu forest, Banerjee & P.R. Shaky 5724; J. Scully 121; J. Scully s.n. Bhutan, Tashigariglua, 1520 m, J.C. White 49; India, Sikkim, S. Kurz s.n.; China, W. Yunnan, Tali range, Lat. 25°40'N, G. Forest 4249; Yunnan A. Henry 10291. *Amphicarpaea ferruginea* var. *bracteosa*. India, Meghalaya, Khasia, Maokadokadok, C.B. Clarke 40383 H; Shillong, 1520 m, C.B. Clarke 13493 C & D; Burma, Upper Burma, Janugme, Rubymines, 7539 ft., September 1914, A. Rodger 231.

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